C50ic
C60ic
C62ic
C80ic

owner's manual

a/d/s/®

analog and digital systems

analog and digital systems

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introduction

Thank you for purchasing an a/d/s/ in-ceiling speaker system. Please read the following instructions carefully. Following these instructions will ensure that your system will deliver the best possible performance.

cautions

To reduce risk of injury because of an accident, be careful when working on a ladder or other high places.

about this manual

In-ceiling speakers can be used with many different receivers/televisions or amplifiers. They are designed to be powered by an amplifier with a minimum of 20 watts of power.

features

tweeter

The C series in-ceiling speakers incorporate a soft dome eyeball tweeter, which lets you aim and tune your system, Ferrofluid™ and has damped voice coils. Note that the C62ic model has a dual tweeter which is movable only in one axis. For this model attention to the the speaker orientation during mounting is required so that the system can be tuned for maximum audio enjoyment.

tweeter protection

A solid state device reduces power to the tweeter when the loudspeaker is operated at unsafe power levels. It resets automatically when power is reduced to a safe level. Note: the tweeter protector provides a significant level of protection. However it does not guarantee that the tweeter cannot be damaged. Always be careful when operating the speakers at a high volume level.

woofer

The polypropylene woofer employs a barium ferrite magnet structure for well damped, extended bass and high efficiency.

installation precautions and tips

Please read these instructions completely for the best enjoyment of your Custom Series speakers.

When you cut into the ceiling to install the speaker, do not cut through the facing or insulation that

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may be above the ceiling. This facing is a moisture barrier. Use duct tape or wide vinyl tape to seal any cuts.

Keep debris and loose material away from the installation location. Do not allow debris to get in the openings of the woofer basket. Debris and loose material can cause buzzing or rattling, and can damage the woofer cone. Install plastic or fiberglass screening above the speaker to keep debris away. Handle the speaker carefully.

Do not let anything touch the speaker cone or dome. Do not clean the speaker with paint thinner or any solvents.

- Consider the services of a professional custom installer. If you have any doubts about your own abilities, it is better not to risk damaging your walls or ceilings, electrical wiring, ventilation ducts or plumbing.
- Work with good quality, correct tools. This will save you time and assure superior results.
- Allow sufficient clearance.
- When using speakers outdoors, locations should be sheltered from direct sunlight, rain or snow. Direct exposure will shorten product life.
- Combined impedance for speakers connected to each channel must be at least 4 ohm. This is the minimum impedance tolerated by most amplifiers. Check with your dealer before wiring multiple speaker pairs.

general mounting suggestions

Avoid placing the speaker within two feet (0.6 meters) of a corner. The acoustic reflections from surfaces near the speakers can detract from the sound quality. Do not place the speaker behind heavy fabrics; if you cannot see through a fabric, you cannot hear through it.
The ceiling speakers are designed for "infinite baffle" operation. The area behind the speaker installation should be at least one-half cubic foot in volume to ensure proper performance. If the area is too small it will limit bass response and cause a peak in the mid-bass range.
The panel on which the speaker is mounted must be rigid. There must not be any air leaks between the area behind the speaker and the listening area.Mounting the speaker on a panel of a suspended ceiling will adversely affect its performance.

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prewiring

- Check local building and electrical codes for compliance of the speaker wire.
- Use stranded wire of at least 16 gauge; for runs over 100 feet, it is preferable to use 14 gauge wire.
- Use only insulated staples or nylon tie straps to secure wiring within the wall to avoid shorts.
- Do not stretch the wire as it is being routed. This could create future (and costly) problems.
- Leave about 2-3 feet of free wire at both ends. Cutting excess wire is better than splicing.
- Always "home run" wires: run a continuous wire from each speaker directly to the source location. Do not connect speakers together any other way for easier diagnosis of faulty wire or speaker problems.
- The C62ic stereo speakers require 2 speaker wires per speaker.
- Wire speakers in phase with the same polarity. Attach positive (+/red) and negative (-/black) terminals consistently.
- Combined impedance for speakers connected to each channel must be at least 4 ohm. This is the minimum impedance tolerated by most amplifiers. Check with your dealer before wiring.

preparing the wall or ceiling cutout

Confirm there is at least 1" between the final cutout and nearby studs or joints for positioning mounting hardware. Temporarily fasten the stiff paper template (supplied) to the wall with thumbtacks. Carefully trace around the perimeter with a pencil. Before making the final cutout of the entire hole, first make a small 4-inch"test" cutout in the center of your penciled outline. Reach your hand inside to verify that studs are outside the outline. This is an important step, since stud finders are not infallible.

To cut the actual hole, first score wallboard with a sharp knife; then use a keyhole saw to complete the cut. Remove remaining debris from the edges. Hold the speaker up to the cutout to make sure it inserts easily without forcing.

At this point, it is a good idea to secure the speaker wire(s) to a stud near the cutout so its own weight will not tug on the terminals of the speaker after it is connected. This will also prevent you from "losing" the wire in the ceiling. Before attaching the wire(s), make sure the speaker wire(s) runs through, not around, the metal mounting bracket.

installation preparation

Use the supplied template to outline the mounting hole. Cut the mounting hole and remove any debris from the area. Take the necessary steps to keep debris from falling into the back of the speaker.

Route the wire(s) from the amplifier to the speaker installation location. Connect the speaker wire(s) to the color-coded terminals. Strip about 1/2" of the insulation from the wire conductors. Twist the wire strands of the conductors into neat bundles. Insert wire(s) into wire holes on speaker plugs and tighten set screws. Plug speaker plugs into crossover terminals on the PC board.

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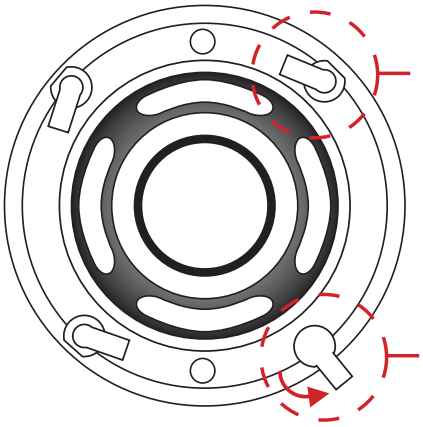
final installation

The speaker is held in place with four mounting clamps that are part of the assembly. When shipped from the factory the clamps are pivoted so they will fit into the mounting hole. When the mounting hole clamp screws are turned, the clamps pivot outward and are then drawn downward until they press against the back of the mounting surface.
Insert the speaker/mounting bezel assembly into the mounting hole. Hold the speaker in place in the mounting hole and evenly tighten the four mounting screws to draw the mounting brackets against the backside of the wall. Gradually tighten the screws, moving from one to another, until the speaker is firmly clamped in place.


the clamps are in this position when the speaker is placed in the mounting hole.
turning the clamp screws pivots the clamp outward and pulls it down against the back of the wall.

custom painting

- Paint the speaker frame and grill before mounting to the wall; paint grill and frame separately.
- Before painting, mask the recessed area of the speaker to completely protect the speaker drivers.
- After painting the grill, gently blow through its perforated holes to prevent paint clogging.

operation

checking the system
Listen carefully to each speaker. If you hear buzzing or rattling noises, remove the speaker and check for a speaker wire(s) or other objects touching the speaker assembly. When you are satisfied with the installation press the grills into place.

tweeter protector
If a speaker sounds "dull", or "lacks "brilliance", you may have activated the tweeter protector. If high power operation causes the tweeter to stop playing, turn down the volume control until normal sound resumes.

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specifications

	C50ic	C60ic	C62ic (Stereo)	C80ic
Frequency response (Hz)	81-20kHz	57-20kHz	65-20kHz	52-20kHz
impedance	8 ohm	8 ohm	8 ohm x 2	8 ohm
Sensitivity 1W/1M (dB)	86dB	87dB	87dB	88dB
max bezel diameter	8 1/16"	9"	9"	10 11/16"
mounting hole	6 9/16"	7 3/4"	7 3/4"	9 7/16"
rear clearance	2 5/8"	3 1/4"	3 1/4"	3 5/8"
recommended power	20-80watts	20-80watts	20-80watts x 2	20-80watts
Woofer	5 1/4"	6 1/2"	6 1/2"	8"
Tweeter	3/4" dome	3/4" dome	1" dome X 2	1" dome

(Specifications subject to change without notice)

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warranty information

LIMITED FIVE YEAR CONSUMER WARRANTY FOR PRODUCT INSTALLED BY AN AUTHORIZED LICENSED DEALER
Directed Electronics, Inc. promises to the original purchaser, to replace this product should it prove to be defective in workmanship or material under normal use, for a period of five years from the date of purchase from the dealer as indicated by the date code marking of the product **PROVIDED** the product was sold by an authorized Directed dealer. During this five year period, there will be no charge for this replacement **PROVIDED** the unit is returned to Directed, shipping pre-paid. This warranty is non-transferable and does not apply to any unit that has been modified or used in a manner contrary to its intended purpose, and does not cover damage to the unit caused by installation or removal of the unit. This warranty is void if the product has been damaged by accident or unreasonable use, neglect, improper service or other causes not arising out of defects in material or construction. Units which are found to be damaged by abuse resulting in thermally damaged voice coils are not covered by this warranty but may be replaced at the absolute/sole discretion of Directed. **ALL WARRANTIES INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE , AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY ARE EXPRESSLY EXCLUDED AND DISCLAIMED TO THE MAXIMUM EXTENT ALLOWED BY LAW, AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT. DIRECTED HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS.** Unit must be returned to Directed, postage pre-paid, with bill of sale or other dated proof of purchase bearing the following information: consumer.s name, telephone number, and address, authorized dealer.s name and address, and product description. Note: This warranty does not cover labor costs for the removal and reinstallation of the unit. **IN ORDER FOR THIS WARRANTY TO BE VALID, YOUR UNIT MUST BE SHIPPED WITH PROOF OF SALE BY AN AUTHORIZED DIRECTED DEALER.** Some states do not allow the limitation on how long an implied warranty lasts, so the above limitation may not apply to you. **LIMITATION OF DAMAGES AND LIABILITY: CONSUMER.S REMEDY IS LIMITED TO REPAIR OR REPLACEMENT OF THE UNIT, AND IN NO EVENT SHALL DIRECTED.S LIABILITY EXCEED THE PURCHASE PRICE OF THE UNIT. IN ANY EVENT, DIRECTED SHALL NOT BE LIABLE FOR ANY DAMAGES (INCLUDING, BUT NOT LIMITED TO, ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, LOST PROFITS, LOST SAVINGS, OR, TO THE EXTENT ALLOWED BY APPLICABLE LAW, DAMAGES RESULTING FROM DEATH OR INJURY ARISING OUT OF OR IN CONNECTION WITH THE INSTALLATION, USE, IMPROPER USE, OR INABILITY TO USE, THE PRODUCT, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. **BY PURCHASING THIS PRODUCT, THE CONSUMER AGREES AND CONSENTS THAT ALL DISPUTES BETWEEN THE CONSUMER AND DIRECTED SHALL BE RESOLVED IN ACCORDANCE WITH CALIFORNIA LAWS IN SAN DIEGO COUNTY, CALIFORNIA.**

declaration of conformity

manufacturer name: Directed Electronics Inc.
manufacturer address: One Viper Way
Vista, California 92081

declares, that the product:

product name: C50ic
C60ic
C62ic
C80ic

conforms to the following standards:

EN55013
EN55020

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